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                 CA/CAplus enhanced with utility model patents from China
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         JUL 16
                 CAplus enhanced with French and German abstracts
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         JUL 18
                 CA/CAplus patent coverage enhanced
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         JUL 30
                 USGENE now available on STN
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NEWS 11
         AUG 06
                 FSTA enhanced with new thesaurus edition
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                 CA/CAplus enhanced with additional kind codes for granted
         AUG 13
                 patents
NEWS 13
         AUG 20
                 CA/CAplus enhanced with CAS indexing in pre-1907 records
NEWS 14
                 Full-text patent databases enhanced with predefined
         AUG 27
                 patent family display formats from INPADOCDB
NEWS 15
         AUG 27
                 USPATOLD now available on STN
NEWS 16
         AUG 28
                 CAS REGISTRY enhanced with additional experimental
                 spectral property data
NEWS 17
         SEP 07
                 STN AnaVist, Version 2.0, now available with Derwent
                 World Patents Index
NEWS 18
         SEP 13
                 FORIS renamed to SOFIS
         SEP 13
NEWS 19
                 INPADOCDB enhanced with monthly SDI frequency
NEWS 20
         SEP 17
                 CA/CAplus enhanced with printed CA page images from
                 1967-1998
NEWS 21
         SEP 17
                 CAplus coverage extended to include traditional medicine
                 patents
NEWS 22
         SEP 24
                 EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS 23
         OCT 02
                 CA/CAplus enhanced with pre-1907 records from Chemisches
                 Zentralblatt
NEWS 24
         OCT 19
                 BEILSTEIN updated with new compounds
NEWS EXPRESS
             19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2,
              CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
              AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.
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              STN Operating Hours Plus Help Desk Availability
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              Welcome Banner and News Items
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              For general information regarding STN implementation of IPC 8
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\* \* STN Columbus

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=> s carbon monoxide (s) cryogenic distill?

1316750 CARBON

28064 CARBONS

1326698 CARBON

(CARBON OR CARBONS)

187809 MONOXIDE

1031 MONOXIDES

188356 MONOXIDE

(MONOXIDE OR MONOXIDES)

158974 CARBON MONOXIDE

(CARBON (W) MONOXIDE)

31075 CRYOGENIC

6427 CRYOGENICS

33443 CRYOGENIC

(CRYOGENIC OR CRYOGENICS)

129786 DISTILL?

167240 DISTD

1 DISTDS

167240 DISTD

(DISTD OR DISTDS)

26835 DISTG

179229 DISTN

1808 DISTNS

179974 DISTN

(DISTN OR DISTNS)

391511 DISTILL?

(DISTILL? OR DISTD OR DISTG OR DISTN)

1047 CRYOGENIC DISTILL?

(CRYOGENIC (W) DISTILL?)

35 CARBON MONOXIDE (S) CRYOGENIC DISTILL?

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=> s l1 and carbon monoxide (s) hydrogen (s) nitrogen
       1316750 CARBON
         28064 CARBONS
       1326698 CARBON
                  (CARBON OR CARBONS)
        187809 MONOXIDE
          1031 MONOXIDES
        188356 MONOXIDE
                  (MONOXIDE OR MONOXIDES)
        158974 CARBON MONOXIDE
                  (CARBON (W) MONOXIDE)
       1023361 HYDROGEN
          6067 HYDROGENS
       1026735 HYDROGEN
                  (HYDROGEN OR HYDROGENS)
        670114 NITROGEN
          3987 NITROGENS
        672920 NITROGEN
                  (NITROGEN OR NITROGENS)
          1031 CARBON MONOXIDE (S) HYDROGEN (S) NITROGEN
L2
             7 L1 AND CARBON MONOXIDE (S) HYDROGEN (S) NITROGEN
=> s 12 and turbine
         42594 TURBINE
         27812 TURBINES
         48395 TURBINE
                  (TURBINE OR TURBINES)
L3
             2 L2 AND TURBINE
=> s 12 or 13
             7 L2 OR L3
=> d l4 ibib ab 1-7
     ANSWER 1 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:
                     2006:1284997 CAPLUS
DOCUMENT NUMBER:
                         147:97884
TITLE:
                         Trace carbon monoxide and hydrogen
                         conversion prior to cryogenic
                         distillation of air
AUTHOR (S):
                         Kumar, R.; Deng, S.
CORPORATE SOURCE:
                        .Chemical Engineering Department, New Mexico State
                         University, Las Cruces, NM, 88003-8001, USA
Adsorption (2006), 12(5-6), 361-373
SOURCE:
                         CODEN: ADSOFO; ISSN: 0929-5607
PUBLISHER:
                         Springer
DOCUMENT TYPE:
                         Journal
LANGUAGE:
                         English
     Liquid Nitrogen is required in the semiconductor industry. This is
     generally produced by cryogenic distillation of air. However, trace levels of
     Carbon Monoxide and Hydrogen need to be
     removed from Nitrogen prior to its use in the semiconductor
     industry. This may be accomplished by catalytic conversion of trace
     Carbon Monoxide and Hydrogen to Carbon dioxide and Water, resp. These
     impurities (Carbon dioxide and Water) are then removed by adsorption from
     air. The latest technol. is to incorporate the catalytic conversion into
     adsorption based thermal swing pre-purification units, which are already used
     to remove Water and Carbon dioxide from air prior to its cryogenic distillation
     Our expts. show that even though Hydrogen is converted to Water by a
     catalytic reaction, presence of Carbon dioxide in this stream
     significantly lowers the performance of the catalyst by as much as
     five-fold. Also, Hydrogen removal by the novel metal Pd catalyst does not
     follow a typical catalyst behavior but an adsorption breakthrough type
```

behavior, i.e. for a constant inlet concentration the outlet concentration of Hydrogen

breaks through at some time and then increases with time. On the other hand, Carbon monoxide conversion on a Hopcalite type catalyst follows typical catalyst behavior, i.e. for a constant inlet concentration the outlet concentration of Carbon monoxide is constant and does not change with time.

data demonstrating these effects followed by a theor. explanation are presented.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:301878 CAPLUS

DOCUMENT NUMBER: 142:357374

TITLE: Apparatus and process for separation of a gas mixture

by cryogenic distillation

INVENTOR(S): Tranier, Jean Pierre

PATENT ASSIGNEE(S): L'air Liquide Societe Anonyme Pour L'etude Et

L'exploitation Des Procedes Georges Claude, Fr.

SOURCE: Fr. Demande, 14 pp.

CODEN: FRXXBL

DOCUMENT TYPE: Patent LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

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PATENT NO.
                        KIND
                               DATE
                                        APPLICATION NO.
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                               -----
                                          -----
    FR 2860576
                         A1
                               20050408
                                        FR 2003-50630
                                                                 20031001
    WO 2005033600
                                        WO 2004-FR50450
                        A1
                               20050414
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
            GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
            LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
            NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
            TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
        RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
            AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
            EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
            SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
            SN, TD, TG
    EP 1671070
                         A1
                               20060621
                                         EP 2004-817100
           AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
    CN 1860339
                        Α
                               20061108
                                          CN 2004-80028567
                                                                 20040921
    JP 2007507682
                         Т
                               20070329
                                          JP 2006-530448
                                                                 20040921
    US 2007000282
                         Α1
                               20070104
                                          US 2006-573903
                                                                 20060329
PRIORITY APPLN. INFO.:
                                          FR 2003-50630
                                                             A 20031001
                                                             W 20040921
                                          WO 2004-FR50450
```

AB In an apparatus for gas separation by cryogenic distillation, the sep. gases are removed

in sep. steps. Thus, oxygen and/or nitrogen and/or

hydrogen and/or methane and/or carbon monoxide

are separated out in appropriate columns. The turbines used in the process may have gas bearings, roller bearings, or magnetic bearings.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:120531 CAPLUS

DOCUMENT NUMBER: 140:130539

TITLE: Process and installation for production of

carbon monoxide by cryogenic

distillation

INVENTOR(S):

Fauroux, Daniele

PATENT ASSIGNEE(S):

L'Air Liquide Societe Anonyme pour l'Etude et l'Exploitation des ProcedesGeorges Claude, Fr.

Fr. Demande, 7 pp. SOURCE:

CODEN: FRXXBL

DOCUMENT TYPE:

Patent

LANGUAGE:

French

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

	PATENT NO.				KIN	D	DATE			APPL	ICAT	ION :	NO.		D.	ATE		
								FR 2003-50621 WO 2004-FR50446										
			ΑE,	AG,	AL,	AM,	ΑT,	AU, DE,	ΑZ,	BA,	BB,	BG,	BR,	BW,	BY,	ΒZ,	CA,	CH,
			LK,	LR,	LS,	LT,	LU,	ID, LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NI,
		<b></b> .	TJ,	TM,	TN,	TR,	TT,	PL, TZ,	UA,	ŪG,	US,	UZ,	VC,	VN,	YU,	ZA,	ZM,	ZW
		RW:	ΑZ,	BY,	KG,	ΚZ,	MD,	MW, RU,	TJ,	TM,	AT,	ΒE,	BG,	CH,	CY,	CZ,	DE,	DK,
			SI,	SK, TD,	TR,	BF,	ВJ,	GR, CF,	CG,	CI,	CM,	GA,	GN,	ИL, GQ,	GW,	ML,	MR,	SE, NE,
	ΕP	1682	•			A1		2006	0726	:	EP 2	004-	8170	99		2	0040	921
		R:			CH,	DE,	DK,	ES, TR,	FR,	GB,	GR,	IT,	LI,	LU,				
	CN	1860						2006					-			2	0040	921
		2007															0040	921
		2007						2007	0705								0060	927
PRIO	PRIORITY APPLN. INFO.:									003-!					00309			
, 7 D	Car	chon i	mono	v.; 4.0	i	~~~	~~ <del>+</del> ~	شء ہ				004-1					00409	921

AB Carbon monoxide is separated from a gas mixture, e.g., syngas, by cryogenic distn. in a two-stage process. First, the mixture of carbon monoxide, hydrogen and nitrogen is cooled and partially condensed to produce a gas enriched in hydrogen and a liquid enriched in carbon monoxide. The liquid enriched in carbon monoxide is then passed through a stripping column to produce liquid carbon monoxide low in hydrogen and gaseous carbon monoxide enriched in hydrogen. The lowhydrogen carbon monoxide is fractionated, a methane-rich stream is recovered first, a carbon monoxide-rich stream second, and nitrogen, possibly containing hydrogen is recovered from the head gases.

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ANSWER 4 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
L4
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ACCESSION NUMBER:

2001:881012 CAPLUS

DOCUMENT NUMBER:

136:249567

TITLE:

Insulation system

AUTHOR(S): CORPORATE SOURCE: Anon.

UK

SOURCE:

Research Disclosure (2001), 451(Nov.), P1873 (No. 451060)

CODEN: RSDSBB; ISSN: 0374-4353 Kenneth Mason Publications Ltd.

DOCUMENT TYPE:

Journal; Patent

LANGUAGE:

PUBLISHER:

English

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RD 451060		20011110	•	

DATE

An insulation techniques that are suitable for any kind of cryogenic distn. system (e.g., air separation, separation of carbon monoxide-hydrogen-nitrogen (methane)) mixts. are described. Columns, turbines, heat exchangers, conduits, and other elements that are operating at cryogenic temps. are placed in a single wall closed cold box with inside wall covered with insulating material. The thermal insulator is sprayed on the surface in one or several layers. The space between the cold box and insulating layer can be evacuated or can contain air. If the space between the cold box contains air, the elements in the cold box operating at high temperature must be cladded to prevent heat transfer by radiation and convection in the absence of insulating material around the elements in the cold box. If the cold box is eliminated completely or partially, the insulation is applied directly onto the outer column walls and heat exchanger, storage tanks, and conduits are insulated by spraying by using spray gun. Elements with moving parts (e.g., turbines, valves, or pumps ) can be enclosed individually or enclosed together in common housing and the insulation can be applied on the housing walls. The heat exchanger can be insulated by applying the insulating material directly by reducing the size of the cold box. The maintenance of the cryogenic separation unit by making hole in the insulating material to gain access to the component to be repaired. After finishing the repair work more insulation can be applied to block the hole. The insulating material is described in

L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

EP-A-1124088.

1997:410587 CAPLUS

DOCUMENT NUMBER:

127:36664

TITLE:

Recovery of carbon monoxide from

nitrogen-contaminated gas mixture containing

APPLICATION NO.

hydrogen, carbon monoxide,

and methane

INVENTOR(S):

Fabian, Rainer

PATENT ASSIGNEE(S): SOURCE: Linde Ag, Germany Ger. Offen., 11 pp.

DATE

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CODEN: GWXXBX

DOCUMENT TYPE:

Patent

LANGUAGE:

German

KIND

\_ \_ \_ \_

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

	DE 19541339	A1	19970507	DE 199	5-19541339	19951106
	DE 19541339	B4	20060810			
PRIC	RITY APPLN. INFO.:				5-19541339	
AB	The procedure involv	res (1)	cooling and	partia:	l condensation	of a H2-CO-CH4
	mixture containing N	12, (2)	withdrawal	of 1st 1	H2-rich gaseous	fraction (3)
	charging of a H2-CO-	·CH4-N2	condensate	to a H2	-stripping colu	umn. (4) separation
	of a 2nd H2-rich fra	ction	and a CO-ric	h fract:	ion containing	CH4 and N2. (5)
	separation of the la	itter f	raction in a	1st red	ctification col	umn to obtain a
	N2-rich fraction and	l CO-ri	ch fraction	contain:	ing CH4. (6) ch	arging of the
	latter fraction into	a 2nd	rectificati	on colu	mn to obtain a	high-purity CO
	fraction and a CH4-c	ontain	ing fraction			Furzel CO
			=			

L4 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1995:902914 CAPLUS

DOCUMENT NUMBER:

123:291148

TITLE:

Process and cryogenic distillation apparatus for manufacturing carbon

monoxide from carbon

monoxide-hydrogen gas mixtures containing nitrogen and methane as

additional constituents

INVENTOR(S): Billy, Jean; Granier, Francois

PATENT ASSIGNEE(S): Air Liquide SA pour l'Etude et l'Exploitation des

Procedes Georges Claude, Fr.

SOURCE: Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 676373	A1	19951011	EP 1995-400751	19950404
EP 676373	B1	19980916		
R: BE, DE, ES,	FR, GB	, NL		
FR 2718428	A1	19951013	FR 1994-4219	19940411
FR 2718428	B1	19971010		
IN 191256	A1	20031018	IN 1994-DE1349	19941025
US 5609040	Α	19970311	US 1995-411878	19950328
ES 2122468	Т3	19981216	ES 1995-400751	19950404
CA 2146736	C	19951012	CA 1995-2146736	19950410
CA 2146736	A1	19951012	·	
JP 08081211	A ·	19960326	JP 1995-84384	19950410
JP 3917198	B2	20070523		
CN 1117574	A·	19960228	CN 1995-104309	19950411
PRIORITY APPLN. INFO.:			FR 1994-4219 A	19940411

AB In this process, in which the CO is separated from the other constituents by distillation under intermediate pressure in a 1st column in which the CH4 is removed as bottom product, and by distillation in a 2nd column to recover the CO, liquid is expanded to cool the the head of one of the 2 columns, and liquid is withdrawn from an intermediate location in the column as reflux in the other column. The head of one of the columns is connected to an intermediate stage of the other column. This method lowers energy consumption, and the apparatus is discussed with schematic flow diagrams.

L4 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN

KIND

ACCESSION NUMBER: 1991:167235 CAPLUS

DOCUMENT NUMBER: 114:167235

TITLE: Manufacture of carbon monoxide and/or argon

DATE

INVENTOR(S):
Bauer, Heinz

PATENT ASSIGNEE(S): Linde A.-G., Germany SOURCE: Ger. Offen., 5 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

					2
	DE 3925662	A1	19910207	DE 1989-3925662	19890803
PRIO	RITY APPLN. INFO.:			DE 1989-3925662	
AB				gas consisting of H, N,	
	impurities, e.g., Ar	and,	optionally,	CH4, is scrubbed with	N(1) at
	superatm. pressure a	and low	er than ambi	ent temps. to give a li	quid scrubber
	effluent consisting	of N,	CO, the impu	rities, and some H and	then separated
	into ≥1 product stre	eams in	≥1 cryogeni	c distillation stages,	the
	overhead stream from	the 1	st distillat	ion stage is partially	condensed in a
	condenser cooled wit	h N(1)	. The botton	m stream from this 1st	stage is
	partially evaporated	l by hea	at exchange	with condensing N, resu	llting in a
	CO(1)-rich product s	tream a	and a $Ar(1) - a$	containing bottom strea	m. This process
	permits the recovery	of CO	and/or Ar f	rom the effluent from s	crubbing of
	crude NH3 synthesis	gas.			_

APPLICATION NO.

DATE

=> file ca

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION FULL ESTIMATED COST 44.01 44.22

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL

ENTRY SESSION

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FILE COVERS 1907 - 25 Oct 2007 VOL 147 ISS 19 FILE LAST UPDATED: 25 Oct 2007 (20071025/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s de 19541339/pn

1 DE 19541339/PN (DE19541339/PN)

=> d 15 iall

ANSWER 1 OF 1 CA COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 127:36664 CA

ENTRY DATE: Entered STN: 15 Jul 1997

TITLE: Recovery of carbon monoxide from nitrogen-contaminated

gas mixture containing hydrogen, carbon monoxide, and

methane

Patent

INVENTOR(S): Fabian, Rainer

PATENT ASSIGNEE(S): Linde Ag, Germany SOURCE: Ger. Offen., 11 pp.

CODEN: GWXXBX

LANGUAGE:

DOCUMENT TYPE:

German

INT. PATENT CLASSIF.:

MAIN: C01B031-18 SECONDARY: C01B003-50

ADDITIONAL: C07C009-04; C07C051-15

CLASSIFICATION: 49-2 (Industrial Inorganic Chemicals)

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. · KIND DATE APPLICATION NO. DATE DE 19541339 A1 19970507 DE 1995-19541339 19951106 <-DE 19541339 B4 20060810

PRIORITY APPLN. INFO.: DE 1995-19541339 19951106

PATENT CLASSIFICATION CODES:

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES ------DE 19541339 ICM C01B031-18 ICS C01B003-50 C07C009-04; C07C051-15 ICA C01B0031-18 [I,A]; C01B0031-00 [I,C\*]; C01B0003-50 IPCI [I,A]; C01B0003-00 [I,C\*] IPCR C01B0003-00 [I,C\*]; C01B0003-50 [I,A]; C01B0031-00 [I,C\*]; C01B0031-18 [I,A]; F25J0003-02 [I,A]; F25J0003-02 [I,C\*]; F25J0003-06 [I,A]; F25J0003-06 ECLA C01B003/50D; C01B031/18; F25J003/02A6; F25J003/02C14;

F25J003/02C10; F25J003/06C10

## ABSTRACT:

The procedure involves (1) cooling and partial condensation of a H2-CO-CH4 mixture containing N2, (2) withdrawal of 1st H2-rich gaseous fraction, (3) charging of a H2-CO-CH4-N2 condensate to a H2-stripping column, (4) separation of a 2nd H2-rich fraction and a CO-rich fraction containing CH4 and N2, (5) separation of the latter fraction in a 1st rectification column to obtain a N2-rich fraction and CO-rich fraction containing CH4, (6) charging of the latter fraction into a 2nd rectification column to obtain a high-purity CO fraction and a CH4-containing fraction.

SUPPL. TERM: carbon monoxide recovery cryogenic distn INDEX TERM: 630-08-0P, Carbon monoxide, preparation

ROLE: PUR (Purification or recovery); PREP (Preparation) (recovery of carbon monoxide from nitrogen-contaminated

gas mixture containing hydrogen, carbon monoxide, and methane) -82-8, Methane, processes 1333-74-0, Hydrogen, processes

INDEX TERM: 74-82-8, Methane, processes 1
7727-37-9, Nitrogen, processes

ROLE: REM (Removal or disposal); PROC (Process) (removal in recovery of carbon monoxide from

nitrogen-contaminated gas mixture containing hydrogen, carbon

monoxide, and methane)

## **WEST Search History**

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DATE: Saturday, October 27, 2007

Hide?	<u>Set</u> <u>Name</u>	Query	<u>Hit</u> Count
	DB=PC	GPB, USPT, USOC, EPAB, JPAB, DWPI; THES=ASSIGNEE; PLUR=YES; OP=	ADJ
	L6	L5 and (single distillation column or fewer near3 column or only one distillation column)	. 3
	L5	L4 and carbon monoxide with hydrogen with nitrogen	43
	. L4	carbon monoxide with cryogenic distillation	88
	DB=PC	GPB, USPT; THES=ASSIGNEE; PLUR=YES; OP=ADJ	
	L3	L2 and reboiler	1
	L2	L1 and turbine	1
	L1	5609040.pn.	. 1

END OF SEARCH HISTORY